

Title (en)
INTEGRATED E-MACHINE CONTROLLER FOR TURBOMACHINE WITH THERMALLY DE-COUPLED FASTENER ARRANGEMENT

Title (de)
INTEGRIERTE E-MASCHINENSTEUERUNG FÜR EINE TURBOMASCHINE MIT THERMISCH ENTKOPPELTER BEFESTIGUNGSANORDNUNG

Title (fr)
CONTRÔLEUR INTÉGRÉ DE MACHINE ÉLECTRONIQUE POUR TURBOMACHINE AYANT UN AGENCEMENT DE FIXATION DÉCOUPLÉ THERMIQUEMENT

Publication
EP 4194673 A1 20230614 (EN)

Application
EP 22181614 A 20220628

Priority
US 202117643421 A 20211209

Abstract (en)
A turbomachine (1100) includes a housing (1118) and a rotating group that is supported for rotation about an axis of rotation (1104) within the housing. The turbomachine also includes a turbomachine stage including a wheel of the rotating group supported within a turbomachine housing of the housing. The turbomachine further includes an e-machine section including an e-machine (1114) that is housed within an e-machine housing of the housing. The e-machine is operably coupled to the rotating group and configured to operate as at least one of a motor and a generator. Moreover, the turbomachine includes an integrated controller (1150) that extends in a circumferential direction about the axis of rotation. The integrated controller is configured for controlling the e-machine. Additionally, the turbomachine includes a thermally decoupled fastener arrangement (1158) that attaches the integrated controller to the e-machine housing. The fastener arrangement thermally decouples the integrated controller from the turbomachine stage.

IPC 8 full level
F02C 6/12 (2006.01); **F01D 15/10** (2006.01); **F02C 7/24** (2006.01)

CPC (source: CN EP US)
F01D 15/10 (2013.01 - EP US); **F01D 25/12** (2013.01 - EP US); **F01D 25/28** (2013.01 - US); **F02C 6/12** (2013.01 - EP); **F02C 7/24** (2013.01 - EP); **H02K 5/04** (2013.01 - CN); **H02K 11/04** (2013.01 - CN); **H02K 11/30** (2016.01 - CN); **F01D 25/16** (2013.01 - EP); **F05D 2220/40** (2013.01 - EP US); **F05D 2220/76** (2013.01 - EP US); **F05D 2240/15** (2013.01 - EP); **F05D 2260/213** (2013.01 - EP); **F05D 2260/231** (2013.01 - US); **F05D 2260/31** (2013.01 - US)

Citation (search report)
• [A] US 2021087967 A1 20210325 - LOUCO LATHOM ALEXANDER [US], et al
• [A] FR 3053756 A1 20180112 - PEUGEOT CITROEN AUTOMOBILES SA [FR]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4194673 A1 20230614; CN 116260289 A 20230613; CN 116260289 B 20240604; US 11655734 B1 20230523; US 2023184137 A1 20230615

DOCDB simple family (application)
EP 22181614 A 20220628; CN 202211577663 A 20221209; US 202117643421 A 20211209